AMENDMENT TO THE CLAIMS

1. (currently amended) An apparatus to inject steam into a hydrocarbon effluent passing through a TLE cone of a hydrocarbon cracking furnace, said apparatus comprising:

(a) at least one injection probe, which is connected at an angle in a range of about 30 to about 60 degrees to said TLE cone; and

(b) a distribution nozzle, which is connected to ~~said~~ an end of said injection probe, wherein said injection probe and distribution nozzle protrude into said TLE cone by a distance in the range of about 1% to about 10% of the radius of the TLE cone.

2. (original) An apparatus as recited in claim 1 wherein said angle is about 45 degrees.

3. (original) An apparatus as recited in claim 2 wherein there are six injection probes located 60 degrees apart around the circumference of said TLE cone.

4. (original) An apparatus as recited in claim 1 whereby said injection probe and distribution nozzle protrude into said TLE cone by a distance of about 1% to about 3% of the radius of the TLE cone.

5. (original) An apparatus as recited in claim 1 wherein said injection probe is located at a distance from the TLE tubesheet in a range of about 12 to about 36 inches.

6. (original) A method to inject steam in a hydrocarbon effluent passing through the TLE cone of a hydrocarbon cracking furnace to reduce formation of a coke material on the TLE exchanger tubesheet, the method comprising:

injecting steam through at least one injection probe wherein said injecting is accomplished by said apparatus in claim 1.

7. (original) A method of injecting steam as recited in claim 6 wherein the steam pressure is in a range of about 30 psig to about 150 psig.

8. (original) A method of injecting steam as recited in claim 7 wherein the steam pressure is in a range of about 30 psig to about 50 psig.

9. (original) A method of injecting steam as recited in claim 6 wherein steam flow is in an amount ranging from about 0.5% to about 10% of the flow of the hydrocarbon effluent.

10. (original) A method of injecting steam as recited in claim 9 wherein steam flow is in an amount in a range of about 1% to about 3% of the flow of the hydrocarbon effluent.